

Application No. 09/286,183

REMARKS

The undersigned attorney thanks the Examiner for a telephonic interview held between the undersigned and the Examiner on March 2, 2004. During the interview, the Examiner and the undersigned discussed the cited references (U.S. Patent 4,696,039 to Doddington and U.S. Patent No. 4,852,170 to Bourdeaux) in view of proposed claim amendments.

Objections Based on Claim Informalities

The Examiner objected to claims 5, 6, 8, 9, 14-16 and 27-29 as being dependent upon a rejected base claim. Applicant has amended, among others, independent claims 1, 11 and 19 to overcome the rejections to those claims. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw these objections in light of the claim amendments and the arguments made below.

The Examiner further objected to claims 22 and 23 as being substantial duplicates of claims 20 and 21, respectively. Applicant respectfully points out to the Examiner that claims 20 and 21 are directed to encoders (LPC and CELP, respectively) while claims 22 and 23 are directed to decoders. Thus, claims 22 and 23 are not substantial duplicates of claims 20 and 21. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this objection.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1, 7, 10, 11-13, 18-20, 22 and 26 as being anticipated by U.S. Patent No. 4,696,039 issued to Doddington ("the Doddington reference"). As the Examiner and the undersigned discussed during the telephonic interview of March 2, 2004, the Doddington reference

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is directed to a speech analysis/synthesis system with silence suppression. The system uses look-ahead energy normalization, or an adaptive energy normalization parameter, to effect energy normalization on a frame-by-frame basis. The system, as part of the normalization process, identifies certain frames as "silent" and other frames as "non-silent." See, e.g., Abstract and cols. 6-7. The system performs energy normalization on non-silent frames (whether voiced or unvoiced) but not on silent frames. See id.

Independent claims 1, 11 and 19, in contrast, have been amended to recite that a frame(s) is analyzed to determine "a spoken sound type" associated with the frame and modifying a sound parameter of a frame "based on said spoken sound type" or adjusting an amplitude of selected frames based on the result of the step of analyzing. Support for the amendment can be found throughout the specification where multiple spoken sound types are identified. For example, on page 1, lines 10-19 of the specification, the application identifies consonant and vowel sounds as appearing in a spoken sentence.

The Doddington reference, however, does not disclose, teach or suggest modifying a sound parameter or adjusting an amplitude of a frame based upon the determination of a spoken sound type. Rather, the Doddington reference distinguishes between silent (no voice activity) and non-silent (voice activity) frames, i.e., whether or not voice activity is present in a frame. Doddington does not, however disclose teach or suggest determining a spoken sound type and modifying a sound parameter or adjusting an amplitude of a frame based upon that spoken sound type. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection and allow claims 1, 7, 10, 11-13, 18-20, 22 and 26.

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Rejections Under 35 U.S.C. § 103

The Examiner also rejected claims 2-4, 17, 24, 25 and 30 under 35 U.S.C. § 103(a) as being unpatentable over the Doddington reference in view of U.S. Patent No. 4,852,170 issued to Bordeaux (the "Bordeaux reference"). The Bordeaux reference is directed to speech digital analysis. Each segment is logically analyzed to identify a class of phonemes and of the phonemes themselves. Neither the Doddington reference nor the Bordeaux reference discloses, teaches or suggests modifying a sound parameter or adjusting an amplitude of a frame based upon the determination of a spoken sound type as required by amended independent claims 1, 11 and 19 (from which the rejected claims depend). Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection and allow claims 2-4, 17, 24, 25 and 30.

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CONCLUSION

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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